

Date: Fri, 21 May 93 20:06:54 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #619  
To: Info-Hams

Info-Hams Digest                      Fri, 21 May 93                      Volume 93 : Issue    619

Today's Topics:

                    2 Meters and Airlines  
                    Audio filter question???

                    A Yagi at 11,000 feet (2 msgs)  
                    Balanced feedline (was: G5RV) (2 msgs)  
                    DJ-580t & FT-530 opinions  
                    G5RV Theory: Help (3 msgs)

                    Intermod/spurious sigs a common HT problem?  
                    Maxcom fraud (was Re: Don't get ripped off by a G5RV)  
                    Radio shack 2mtr ht, DTMF tone prob  
                    Ramsey SCA Kit and pro-2004?

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 20 May 1993 23:37:08 GMT  
From: topaz.bds.com!topaz.bds.com!ron@uunet.uu.net  
Subject: 2 Meters and Airlines  
To: info-hams@ucsd.edu

> I have used a walkie-talkie from a plane many times. The plane  
> has never crashed. I used to drink with an SM commercial pilot who  
> used his walkie from the flight deck all the time.

Well other than the fact that it's illegal, it's just fine. Despite your  
drinking buddies, most airline personel will take a dim view to you attempting  
to use unauthorized electronic devices on board (especially given the recent  
hysteria).

-Ron

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Date: 21 May 93 17:01:34 GMT  
From: concert!balsam!etowah.cs.unca.edu!sampson@decwrl.dec.com  
Subject: Audio filter question???  
To: info-hams@ucsd.edu

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\*\*\*\*\*  
\* Daryl E. Sampson \* Amateur Radio  
\*  
\* EMAIL: dsampson@aurora.ncdc.noaa.gov \* KM4GO \*  
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Date: Fri, 21 May 1993 01:26:53 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!  
ux1.cso.uiuc.edu!sdd.hp.com!col.hp.com!news.dtc.hp.com!srngenprp!  
alanb@network.UCSD.EDU  
Subject: A Yagi at 11,000 feet  
To: info-hams@ucsd.edu

Art Johnson (arthurj@equinox.unr.edu) wrote:

: My friend N7PQO will be spending six weeks at a scientific research site in  
: Greenland. He hopes to take his transceiver and keep in touch with family  
: and friends back here in Reno, NV. Beyond that, he expects to work QSO's  
: aplenty with American hams and probably many others.

..  
: The scientific station is set up at the very summit of Greenland's ice pack,  
: 11,000 feet above bed rock.

..  
: My question for you all to ponder and respond to: Does an antenna located  
: on an 11,000-foot-thick ice shelf "see" the ice surface to an appreciable  
: extent, or does it work like a Yagi (for example) in free space? If the latter  
: is true, it seems Mike could hope to build a many-element wire Yagi ...

Well, you asked for an "opinion" and that's all this is, since I have no  
hard data. I have heard that Little America used HF antennas lying on the  
ice. I expect that wet ice or slushy snow would act as a lossy conductor.  
But hard-frozen ice should be a pretty good insulator. Try it! Take an  
ice cube out of the refrigerator and see if it measures infinity with an  
ohmmeter. Once it starts to melt, you'll get conduction through the  
water film on the surface.

AL N1AL

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Date: 21 May 93 15:08:19 GMT  
From: ogicse!emory!gatech!kd4nc!ke4zv!gary@network.UCSD.EDU  
Subject: A Yagi at 11,000 feet  
To: info-hams@ucsd.edu

In article <C7Cs0t.Hyp@srigenprp.sr.hp.com> alanb@sr.hp.com (Alan Bloom) writes:  
>Art Johnson (arthurj@equinox.unr.edu) wrote:  
>:My question for you all to ponder and respond to: Does an antenna located  
>:on an 11,000-foot-thick ice shelf "see" the ice surface to an appreciable  
>:extent, or does it work like a Yagi (for example) in free space? If the latter  
>:is true, it seems Mike could hope to build a many-element wire Yagi ...  
>  
>Well, you asked for an "opinion" and that's all this is, since I have no  
>hard data. I have heard that Little America used HF antennas lying on the  
>ice. I expect that wet ice or slushy snow would act as a lossy conductor.  
>But hard-frozen ice should be a pretty good insulator. Try it! Take an  
>ice cube out of the refrigerator and see if it measures infinity with an  
>ohmmeter. Once it starts to melt, you'll get conduction through the  
>water film on the surface.

I don't think the conductivity of ice has much to do with it. The real  
issue is the dielectric constant of ice. Anybody have a reference handy?  
That could drastically change the tuning of an antenna laid on ice.

Gary

--  
Gary Coffman KE4ZV                   |     You make it,             | gatech!wa4mei!ke4zv!gary  
Destructive Testing Systems       |     we break it.            | uunet!rsiatl!ke4zv!gary  
534 Shannon Way                    |     Guaranteed!            | emory!kd4nc!ke4zv!gary  
Lawrenceville, GA 30244           |                             |

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Date: 21 May 93 17:09:04 GMT  
From: news.mentorg.com!mbutts!mbutts@uunet.uu.net  
Subject: Balanced feedline (was: G5RV)  
To: info-hams@ucsd.edu

I was about to suspend a full-size G5RV between a pair of very tall trees  
at our new place. Now I'm not so sure. I want an all-band antenna for  
both hamming and SWL. I'm only putting up one HF antenna. I already  
have a tuner (AEA Econotuner) which has a transformer for balanced feed.  
So I'm thinking a "Zepp" fed by "open" twinlead (the stuff that's about

an inch wide, 450 ohms I dimly recall, that they have at Portland Radio Supply) might be just the ticket. But I have questions.

First, the lack of shielding. Will this subject me to more noise picked up from the house and shack, such as computers and power lines?

Second, I'm planning to use the 'dryer vent stuffed with foam' method shown in the ARRL Handbook to get the feedline, plus several 9913 coaxes for VHF, into the house. How much clearance is needed to avoid messing up the balanced feedline?

Third, is there any allband wire antenna with shielded coax feedline that stands up to proper analysis? I think the big appeal of the G5RV is the belief that it's an efficient allband wire antenna with coax feed.

--

Mike Butts    mbutts@qcktrn.com    Research Engineering Mgr.    503-685-1302  
Quickturn Systems, Inc.,   8005 SW Boeckman Road, Wilsonville, Oregon 97070  
My opinions are my own, and aren't necessarily shared by Quickturn Systems.

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Date: 21 May 93 20:15:07 GMT  
From: pa.dec.com!nntpd2.cxo.dec.com!nuts2u.enet.dec.com!little@decwrl.dec.com  
Subject: Balanced feedline (was: G5RV)  
To: info-hams@ucsd.edu

mbutts@mbutts.mentorg.com (Mike Butts) writes:

>I was about to suspend a full-size G5RV between a pair of very tall trees  
>at our new place. Now I'm not so sure. I want an all-band antenna for  
>both hamming and SWL. I'm only putting up one HF antenna. I already  
>have a tuner (AEA Econotuner) which has a transformer for balanced feed.

Then don't worry about putting up a G5RV. Use the tuner and reasonable quality coax and you'll be fine. There may be a substantial SWR on the coax, but the tuner will provide a conjugate match returning all (most) of the power back to the antenna. As Gary pointed out, if the feedline losses are low, the high SWR isn't a problem if you have a tuner.

>Third, is there any allband wire antenna with shielded coax feedline that  
>stands up to proper analysis? I think the big appeal of the G5RV is the  
>belief that it's an efficient allband wire antenna with coax feed.

I suspect its "efficiency" is as good as any wire antenna of its length is going to be. My recommendation is put up the highest longest inverted V or other random wire you can, place a current balun on the feedline to prevent current from flowing on the feedline, and use the tuner to give all band

operation. If you didn't have a tuner, I'd suggest a parallel or stubbed dipole as they can provide all band coverage with a good match.

73,  
Todd  
N9MWB

-----  
Date: Fri, 21 May 1993 05:31:23 GMT  
From: csus.edu!netcom.com!jfh@decwrl.dec.com  
Subject: DJ-580t & FT-530 opinions  
To: info-hams@ucsd.edu

jga@dreaml.wariat.org (Jon Anhold) wrote:

>I had a 580, traded it for a Yaesu 470 which I upgraded to a 530 and love  
>it. Be sure it has the Intermod Fix from the factory.

What does the intermod fix fix (which band), and how well does it fix it?

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Jack Hamilton KD6TTL jfh@netcom.com PO Box 281107 SF, CA 94128 USA

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Date: 21 May 93 15:16:15 GMT  
From: ogicse!emory!gatech!kd4nc!ke4zv!gary@network.UCSD.EDU  
Subject: G5RV Theory: Help  
To: info-hams@ucsd.edu

In article <C7CtoE.J2E@srngenprp.sr.hp.com> alanb@sr.hp.com (Alan Bloom) writes:  
>

>Another factor is feedline radiation, caused by feeding the balanced  
>antenna with unbalanced feedline (coax). This problem is worse with  
>non-resonant antennas. I would include a current-type balun at the  
>coax-to-twinlead transition. It could be as simple as a few turns  
>of the twinlead (or coax) wrapped around a big ferrite toroid.

While many commercial G5RV style antennas do this, it's not a really good idea if you're going to run any power. At certain impedances, the current at this point can be quite high, and can saturate the ferrite. It'll then get hot and fail. If you use a balun, an air core type would be preferred. Six or eight tight turns of coax will do.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
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534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

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Date: Fri, 21 May 1993 02:02:38 GMT  
From: elroy.jpl.nasa.gov!sdd.hp.com!col.hp.com!news.dtc.hp.com!srngenprp!  
alanb@ames.arpa  
Subject: G5RV Theory: Help  
To: info-hams@ucsd.edu

Steve Mosier (MOSIER@steffi.uncg.EDU) wrote:  
: I've been following the G5RV thread hoping (in vain) that someone would work  
: through the theory behind its design. So I tried to understand it myself,  
: based on the design shown in the ARRL Antenna Handbook, namely 102 ft. of  
: dipole center-fed by 34 ft. of 75-ohm twinlead. On 20 meters (what it was  
: designed for), that is a 3/2-wavelength dipole, fed by a half-wavelength of  
: 75-ohm line. So the radiation resistance of the 3rd harmonic dipole is going  
: to be somewhere around 100 to 120 ohms, let's say. But I can't understand  
: why we have a half-wavelength of parallel line.

The half-wave line has no effect on the feedpoint impedance on 20 meters.  
100 ohms at the feedpoint becomes 100 ohms at the other end of the  
twinlead. If all you wanted was 20 meter operation, you could just run  
coax all the way to the center of the 1/2-wave dipole.

By the way, I think the twin-lead is supposed to be 300 or 450 ohm,  
not 75 ohms.

However, on other bands the 34 feet of twinlead is no longer a half-wave  
long. As I understand it, 34 feet is a compromise value that transforms  
the feedpoint impedance on the other bands to roughly (OK, VERY roughly)  
50 ohms.

: ...But I can find no reason why a coax-fed antenna should not behave  
: identically as an all-band radiator, if one ignores the potential losses  
: due to feeding a lossy cable at high SWR.

As explained above, if you did this the SWR would be higher than with  
the 34-foot matching section.

Another factor is feedline radiation, caused by feeding the balanced  
antenna with unbalanced feedline (coax). This problem is worse with

non-resonant antennas. I would include a current-type balun at the coax-to-twinlead transition. It could be as simple as a few turns of the twinlead (or coax) wrapped around a big ferrite toroid.

AL N1AL

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Date: 21 May 93 14:53:32 GMT  
From: ogicse!emory!gatech!kd4nc!ke4zv!gary@network.UCSD.EDU  
Subject: G5RV Theory: Help  
To: info-hams@ucsd.edu

In article <01GYEFKHYN9E8WW1A5@IRIS.UNCG.EDU> MOSIER@steffi.uncg.EDU (Steve Mosier) writes:

>  
>Question No. 2: The ARRL Handbook says, "A dipole can be used as an all-band  
>radiator by using tuned open-wire feedline." (The familiar Zepp, as the term is  
>used today -- Zepp REALLY refers to the end-fed radiators which trailed behind  
>the Zeppelin airships). But I can find no reason why a coax-fed antenna should  
>not behave identically as an all-band radiator, if one ignores the potential  
>losses due to feeding a lossy cable at high SWR. Is that the reason why we  
>think of a ladder-line antenna as all-band, that the ladder-line exhibits  
>little loss even at high SWR, whereas the coax has more loss? Assuming we  
>properly match the coax at the antenna feedpoint to prevent a radiation current  
>on the outside of the coax, I can't find any other reason (than loss) for using  
>the ladder line. Again, am I looking at this correctly? BTW, the loss factor  
>is a perfectly good reason. I just want to know if that's the ONLY reason.  
>I'm a long-time lover of Zepp antennas.

The ladder line won't be "matched" to the flattop either, but because it's  
\*balanced\* line it shouldn't exhibit feedline radiation. A choke balun  
can \*reduce\* coax feedline radiation, but because of near field coupling,  
it won't eliminate it. Ladder line normally has low loss, but then so does  
coaxial \*air\* dielectric line. Loss plays a factor in choosing ladder line,  
but the main reason is to feed a balanced antenna with a balanced line  
driven by a balanced tuner. With everything nicely balanced, a counterpoise,  
or an earth ground, aren't \*necessary\* to the operation, and the antenna  
radiates it's intended pattern. There's many a slip between theory and  
practice, however, and oftentimes the physical advantages of coax will  
outweigh the theoretical advantages of open wire line.

I've used 5 wire line to feed an unbalanced vertical antenna. (Picture  
the dots on a die as an end on view.) This is cheaper than coax at high  
power, 50,000+ watts, but it's certainly harder to hang and handle. I'd  
have used 6 1/8 inch rigid pressurized coax air line if the budget could  
have stood it.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
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Lawrenceville, GA 30244				

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Date: 21 May 93 15:28:36 GMT

From: ogicse!emory!gatech!kd4nc!ke4zv!gary@network.UCSD.EDU

Subject: Intermod/spurious sigs a common HT problem?

To: info-hams@ucsd.edu

In article <C7C6rn.AoM@ucdavis.edu> ez006683@othello.ucdavis.edu (Daniel D. Todd) writes:

>FT-530. If you want to get a newer dual bander that does well with  
>intermod try the FT-470. I have one and have used along side both te  
>DJ-580 and FT-530 it seems to do much better than either of these two  
>radios. The only time I ever had a problem was when it was sitting  
>within 8" of an old bearcat scanner. No problem at 12" though. The '470  
>isn't DC-Daylight though. It will open up to lock on almost any  
>frequency you like but it is as deaf as a doorknob outside the ham and  
>pub-service freqs. Another advantage to the '470 is the fact that with  
>the '530 out the prices seem to be going down.

I love my 470, but when it came out it was roundly condemned as the  
\*worst\* with respect to intermod of any of the then available dual  
banders. Of course now all the old good radios are gone, and the  
new crop is much worse, so the FT470 looks like a champ by comparison.  
I love the FT470 user interface, I love the ruggedness, I can live  
with the intermod, and current prices are very attractive. I'd say  
go for it.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
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Lawrenceville, GA 30244				

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Date: 21 May 93 15:11:14 GMT

From: ogicse!emory!gatech!kd4nc!ke4zv!gary@network.UCSD.EDU

Subject: Maxcom fraud (was Re: Don't get ripped off by a G5RV)

To: info-hams@ucsd.edu



In article <C7Csnr.IF9@srngenprp.sr.hp.com> alanb@sr.hp.com (Alan Bloom) writes:  
>Dave Newkirk (dnewkirk@arrl.org) wrote:

>  
>: Your idea about autotuners is well-taken, esp for hammy applications. But  
>: do consider HF frequency-hopping spread spectrum--one would need a \*high-  
>: speed\* tuner for that. Resistors, luckily, have sufficiently rapid response  
>: time, and an unlimited number of memories. So I suspect that resistive  
>: antenna broadbanding is of particular value this special application.  
>  
>But why not just use a high-efficiency antenna and a high-power attenuator?  
>That way, you can exactly control the highest SWR the transmitter will  
>ever see. (e.g. a 6 dB attenuator gives a minimum 12 dB return loss for  
>a maximum SWR of 1.67, even with no antenna connected.)

Well, on frequencies where the antenna is a good match, the resistor  
will only drop power by 3 db. Your attenuator always drops it by 6 db.

Gary

--  
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534 Shannon Way | Guaranteed! | emory!kd4nc!ke4zv!gary  
Lawrenceville, GA 30244 | |

-----  
Date: 20 May 93 08:28 CDT  
From: elroy.jpl.nasa.gov!swrinde!cs.utexas.edu!news.uta.edu!utacfd.uta.edu!trsvax!  
trsvax!rpo@ames.arpa  
Subject: Radio shack 2mtr ht, DTMF tone prob  
To: info-hams@ucsd.edu

Tell him to turn on the Touch-Tone Auto-Reply feature. This will  
eliminate the DTMF hang time (so he will have to hold down PTT  
while he sends his tones), but the carrier drops immediately  
when he releases PTT.

Paul Opitz  
Radio Shack Publications

-----  
Date: Thu, 20 May 1993 18:22:03 GMT  
From: overload.lbl.gov!agate!howland.reston.ans.net!ux1.cso.uiuc.edu!sdd.hp.com!  
saimiri.primate.wisc.edu!usenet.coe.montana.edu!news.uoregon.edu!  
netnews.nwnet.net!spiff.@dog.ee.lbl.gov

Subject: Ramsey SCA Kit and pro-2004?  
To: info-hams@ucsd.edu

Michael Covington (mcovingt@aisun3.ai.uga.edu) wrote:  
: Does the Pro-2004 get the FM broadcast band?  
:  
: There is no reason to expect an SCA adapter to work on narrowband FM signals...  
: in fact there is every reason to assume a subcarrier is \_not\_ present,  
: because there isn't the bandwidth for it.

Yes, it does. In addition, TV sound carriers have the SAP  
(Seperate Audio Program) as a FM subcarrier at around 75 kHz.

Mark Zenier markz@ssc.wa.com markz@ssc.com

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Date: 21 May 93 17:07:47 GMT  
From: anomaly.sbs.com!kd1hz@uunet.uu.net  
To: info-hams@ucsd.edu

References <930518.224343.5e4.rusnews.w165w@garlic.sbs.com>,  
<1993May20.000048.11197@news.nd.edu>,  
<930520.233617.8Y1.rusnews.w165w@garlic.sbs.com>  
Subject : Re: Radio Shack 70cm HT?

system@garlic.sbs.com (Tony Pelliccio) writes:

>Simple, Radio Shack is more prominent and available to people. I mean,  
>how far can you go without at least seeing a franchise? :)

Very true. One reason why RS poses a problem is that all the CBers go there  
to get their latest and greatest 40 channel rig. Then, they walk in,  
see this "neat walkie talkie" on sale, and will go and buy it instead,  
regardless of whether or not they have a license.

The likelihood that this will happen at an HRO or AES store is slim.

MD

--  
-- Michael P. Deignan, KD1HZ / Since I \*OWN\* SBS.COM,  
-- Domain: kd1hz@anomaly.sbs.risc.net / these opinions generally  
-- UUCP: ...!uunet!anomaly!kd1hz / reflect those of my  
-- Telebit: +1 401 455 0347 / company...  
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Date: 21 May 93 16:28:33 GMT

From: rtech!amdahl!amdcad!angelo!clark@decwrl.dec.com  
To: info-hams@ucsd.edu

References <C7AE8L.JtM@ucdavis.edu>, <2867@tekgen.bv.tek.com>,  
<1993May20.182514.4524@cs.cornell.edu>  
Subject : Re: 2 Meters and Airlines

chapman@cs.cornell.edu (Richard Chapman) writes:

>brucec@tekgen.bv.tek.com (Bruce Cheney) writes:

>>How about getting them through the security monitors? Do they  
>>get all excited when they see a small handheld in carry-on  
>>baggage?

>>Bruce Cheney NI7M

>I always put my HT in my carry-on when I travel (but have never used  
>it on the plane), and I have never been questioned about it.

I only had one incident, and that was flying out of DULles a few years  
ago. It was kinda like the STUPID Panasonic commercial where this guy gets  
harrassed about the faceplate for his car stereo.

Anyways, it cost the OF running the gate his job, because I went direct  
to the station manager of the airline I was booked on.

I was \_pissed\_, people. And, because of that, I will ALWAYS recommend  
Continental.

73 (88 where applicable :->)

Brad // NP4AI

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Date: 21 May 93 15:05:24 GMT  
From: ogicse!emory!gatech!kd4nc!ke4zv!gary@network.UCSD.EDU  
To: info-hams@ucsd.edu

References <tpang.737870323@sfu.ca>, <1993May20.082907.23672@ke4zv.uucp>,  
<tpang.737946150@sfu.ca>  
Reply-To : gary@ke4zv.UUCP (Gary Coffman)  
Subject : Re: RFI from ZyXEL modem, please advise

In article <tpang.737946150@sfu.ca> tpang@fraser.sfu.ca (Tsui Ting Debbie Pang)  
writes:

>

>This is the very first REAL reply/advise I got. I thank you very very much.  
>I'll go and find such conductive spray, just is it like spray paint?  
>where can I buy it? Radio Shack? Electronics Parts store?  
>This might be better than laying Al foils.

Most major electronic distributors carry the GC brand chemicals. There are a couple of cautions when using this stuff. Of course you want to spray it on the inside to avoid making the equipment look bad. This requires that you take the modem apart so there's no chance of getting any of the spray on the circuitry. Test a small segment of the cabinet with the spray first to make sure it doesn't attack the plastic. It won't attack most plastics, but better safe than sorry. Also look carefully to make sure that none of the sprayed surface will come in contact with circuitry when you reassemble the modem. Wouldn't want to short anything out. If it looks like something could touch, use some "fish paper" to insulate it.

>(yea, my modem has 2 TI 320C25 DSP chips running at 40MHz, and a 68000  
>at 13.3 MHz, which I'll mod it to run at 20MHz, lots of signals, and  
>how it passed FCC Part 68 and 15 (printed on back) , doesn't say Class B)  
>Is it Class B equivalent? Otherwise it is great modem). Oh, my monitor  
>is doing it too, probably too much to do that one, but it's not as bad either.

You can do the inside of the monitor case too. But be very careful of the areas near the HV. You may want to install fish paper here as well. Most monitors don't radiate much through the screen, color monitors almost never do due to the mask, but it's sometimes a problem with monochrome monitors. If so, a fine screenwire mesh can be placed over the monitor face and grounded to the conductive spray in the cabinet, a friction fit will do. This mesh will act as a shield, and also do double duty as an anti-glare filter for the screen.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
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End of Info-Hams Digest V93 #619  
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